



CCA GCA ACC AAT GAT GCC CGT T-TAMRA-3' CA GCA ACC AAT GAT GCC CGT T-TAMRA-3'

CCA GCA AGC ACT GAT GCC TGT T-TAMRA-3' CA GCA AGC ACT GAT GCC TGT T-TAMRA-3'

Fig. 1A

Fluorescent Dyes

	Absorbance Maxima	Emission Maxima
Fluorescein	494nm	525nm
Tetrachloro fluorescein	521nm	536nm
TAMRA	565nm	580nm

Fig. 1B

Cleaved Fragments:

Fig. 1C

~

Fig.

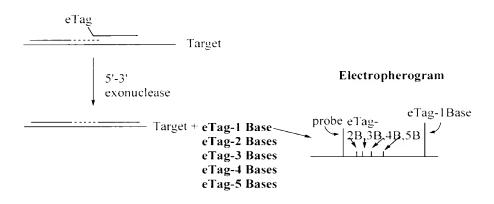


Fig. 3A

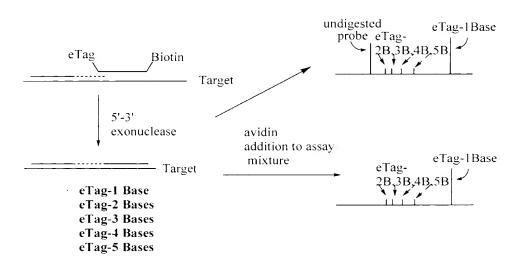


Fig. 3B

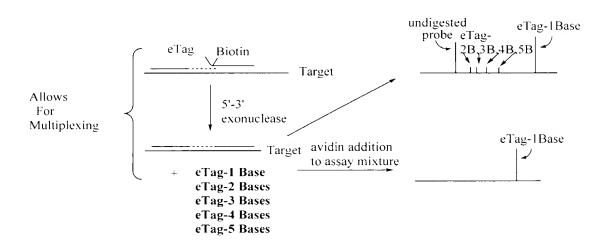


Fig. 3C

Fig. 3D

Fig. 4

e-tag Reporter	Elution Time on CE, min	Mass
HN O O O	H 6.4	778
CI CI COOH OH OH OH OH OH OH OH OH OH	NH ₂ N 7.1	925
CI CI O-P-O NH2 CI CI O-P-O NN CI CI	7.3	901
CI CI COOH CI CI O-P-O-OH HN O-O-O-OH	NH ₂ N 7.7	994
CI CI COOH O CI HN OMe OMe O-P-O OMe OMe O-P-O-P-O-P-O-P-O-P-O-P-O-P-O-P-O-P-O-P	8.0	985
CI CI COOH NH2 OHO	9.25	961

Fig. 5

e-tag Reporter	Charge	Elution Time, min
OFFluorescein		
$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \end{array}\\ \end{array} \end{array} \\ \begin{array}{c} \begin{array}{c} \\ \end{array} \end{array} \\ \begin{array}{c} \begin{array}{c} \\ \end{array} \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \end{array} \\ \begin{array}{c} \begin{array}{c} \\ \end{array} \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \begin{array}{c} \begin{array}{c} \\ \end{array} \end{array} \\ \begin{array}{c} \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \\ \begin{array}{c} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \\ \end{array} \\ \\ \end{array} \\ \begin{array}{c} \\ \end{array} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \\ \end{array} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \\ \end{array} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \\ \\ \end{array} \\ \\ \end{array} \\ \\ \\ \end{array} \\ \\ \\ \end{array} \\ \\ \\ \\ \\ \end{array} \\$	-8	12.1*
O _√ Fluorescein		
$ \begin{array}{c c} HN & O \\ & Fluorescein \end{array} $	-9 dC	12.7
$HN(+)$ $O-P-O-C_6C_6C_6C_6C_6$	6	12.8
OFluorescein	40	
O Fluorescein O C_6 O C_6 O C_6 O C_6 O C_6	-7	13.1
O Fluorescein		
O Fluorescein O O O O O O O O O O O O O O O O O O O	-6 dC	13.0
O Fluorescein O P-O- $C_6C_6C_6$ 5 O-	-6	13.4
(*) 0-P-0-C ₆ C ₆ C ₆	-0 HC	13.4
OF Fluorescein HN O-P-O-C ₃ C ₃ OF Fluorescein HN O-P-O-C ₃ C ₉ dC OF Fluorescein	-5	12.8*
O Fluorescein		
HN () 0-P-O-C ₃ C ₉ dC	-5	13.2*
O Fluorescein		
O Fluorescein HN () O P O C C C C C C C C C C C C C C C C C	-5	14.8
HN () 0-P-0-TTTdC	-6	17.3
O. Fluorescein		
HN () O-P-O-TTdC	-5	17.0
O Fluorescein		
HN () O-P-O-TTdC O-Fluorescein HN () O-P-O-C ₉ 5 O-	-4	15.2*
OFFluorescein OP-O-TdC		
^{ПІN} () O-P-O— TdC 0-	-4	16.5
-		

Fig. 6

APPHOVED	O.G. 743.	
BY	CLASI	30 0007 66
DBAFTS**A**		

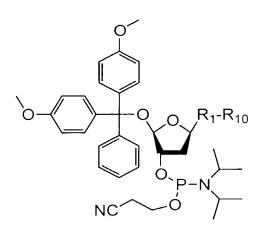


Fig. 7

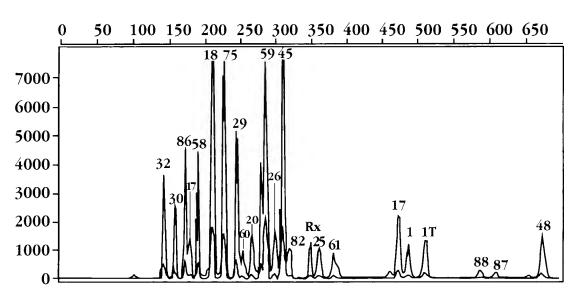


Fig. 8

ROOC COOR N
$$X = \text{halogen}$$

HO $X = \text{halogen}$

HOOC $X = \text{halogen}$

HOOC $X = \text{halogen}$

HOOC $X = \text{halogen}$

HOOC $X = \text{halogen}$

OCE

Fig. 9

(9 negative charges per coupling)

Fig. 10

HOCCOP OF ONOH

Pyridine

HOCCOP OF ONOH

DCC,
$$CH_2Cl_2$$

HoCCOP OF ONOH

DMF

HOCCOP OF ONOH

DCC, CH_2Cl_2

CEO

P-N

CEO

P-N

CI

95% no purification

Fig. 11

$$M = Mobility Modifier$$

$$M =$$

Fig. 12

$$\begin{array}{c} \text{HO} \longrightarrow \text{OH} \\ \text{CIOC-R-COCI} \\ \text{H}_2\text{O} \\ \text{H}_2\text{O} \\ \text{H}_2\text{O} \\ \text{H}_2\text{O} \\ \text{H}_2\text{O} \\ \text{H}_2\text{O} \\ \text{Pyridine} \\ \text{CEO}_{\text{P},\text{N}} \\ \text{CEO}_{\text{P},\text{N}} \\ \text{CEO}_{\text{P},\text{N}} \\ \text{CI} \\$$

Fig. 13

000

) (000) (000)

COCI

1000/

 H_2N

COCI

Fig.

ă

Fig. 16

ACLA012

O NH₂ O Fluorescein HN O O (dT)₂dTdC HN O O (dT)₂dC^{Br}

Fig. 17A

ACLA013 ACLA019 O. Fluorescein O. Fluorescein HN OR (dT)₂dC ACLA014 ACLA020 O Fluorescein O. Fluorescein dGdC HN ACLA015 ACLA021 O Fluorescein O C₉C₉C₉C₉C₉C O Fluorescein ACLA022 ACLA016 Fluorescein O. Fluorescein ACLA023 ACLA017 O Fluorescein ACLA024 ACLA018 O_s Fluorescein O C_3C_3 O Fluorescein

Fig. 17B

Airh Vi RV

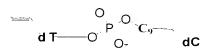
ACLA037

ACLA038

ACLA039

ACLA040

Fluorescein



ACLA041

Fluorescein

ACLA042

Fluorescein

ACLA043

Fluorescein

ACLA044

Fluorescein

ACLA045

Fluorescein

ACLA046

Fluorescein

$$= \int_{0}^{\mathsf{d}} \mathsf{L} - 0 \int_{0}^{\mathsf{O}_{-}} \mathsf{C}^{3} - \mathsf{d} \mathsf{C}$$

ACLA047

Fluorescein

Fig. 17D

Fluorescein

$$T = C_0$$
 T = $C_0 = C_0$ O = $C_0 = C_0$ dC

ACLA049

Fluorescein

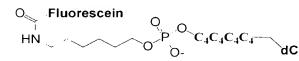
ACLA050

ACLA051

ACLA052

O Fluorescein
$$C_3C_9$$
 C_3C_9 C_3C_9

ACLA053



ACLA054

ACLA055

ACLA056

O. Fluorescein O.
$$C_9C_9C_4$$
 dC

ACLA057

ACLA058

O. Fluorescein
O.
$$C_9C_9C_9C_9C_9$$
O- $C_9C_9C_9C_9$

ACLA059

O Fluorescein O
$$C_3C_3C_3C_9$$
 dC

Fig. 17E

O Fluorescein
$$C_3C_9C_9$$
 $C_3C_9C_9$

ACLA061

ACLA062

ACLA063

ACLA064

ACLA065

ACLA066

ACLA067

ACLA068

ACLA069

Fig. 17F

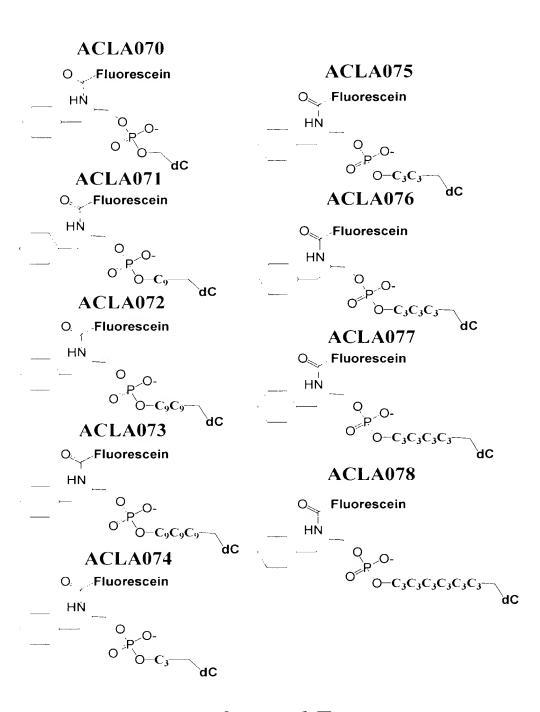


Fig. 17G

ACLA079 Fluorescein ACLA084 Fluorescein ACLA080 ACLA085 O. Fluorescein O_{\downarrow} Fluorescein ACLA086 $0-C_3C_3C_3C_9-$ ACLA081 O_{c.} Fluorescein ACLA087 0 Fluorescein O-C₄C₄C₄-ACLA082 O_{s j} Fluorescein ACLA088 Fluorescein O-C4C4C4C4 ACLA083 O_{>>} Fluorescein

Fig. 17H

Fluorescein

$$C_3C_3TC_3 \longrightarrow dT \longrightarrow O \longrightarrow O \longrightarrow dC$$

ACLA090

Fluorescein

$$C_3C_3C_3TC_3$$
 d T O O O O O

ACLA091

Fluorescein

ACLA092

Fluorescein

$$C_{12}TC_{12} \stackrel{\text{def}}{=} T \longrightarrow O \stackrel{\text{O}}{=} C_{9} \longrightarrow \text{def}$$

ACLA093

Fluorescein

ACLA094

Fluorescein

ACLA095

OFFluorescein

ACLA096

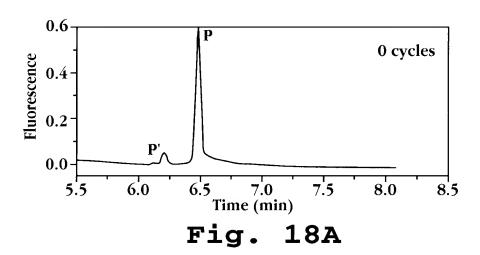
O Fluorescein

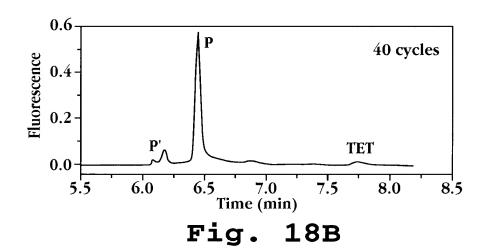
ACLA097

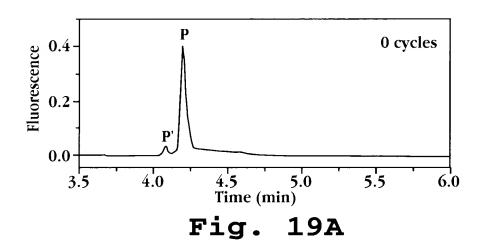
O. Fluorescein

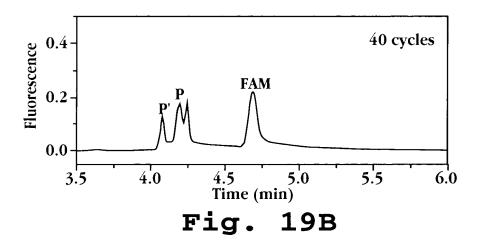
Fig. 17I

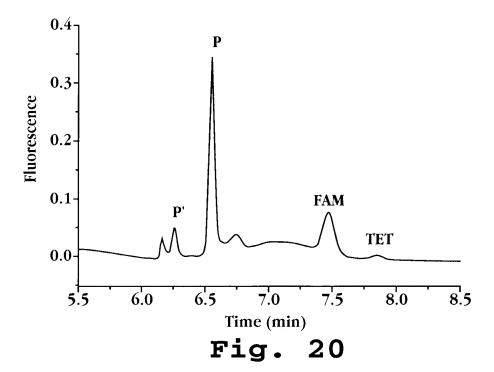
Fig. 17J

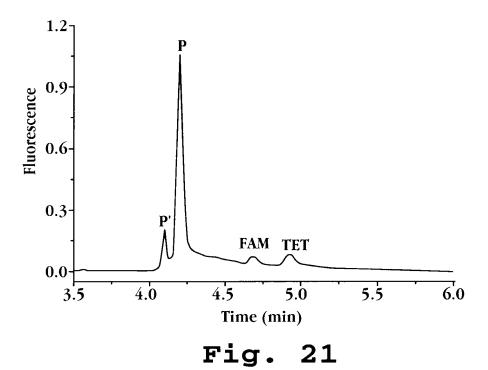












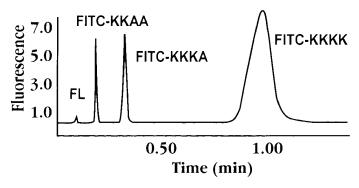


Fig. 22

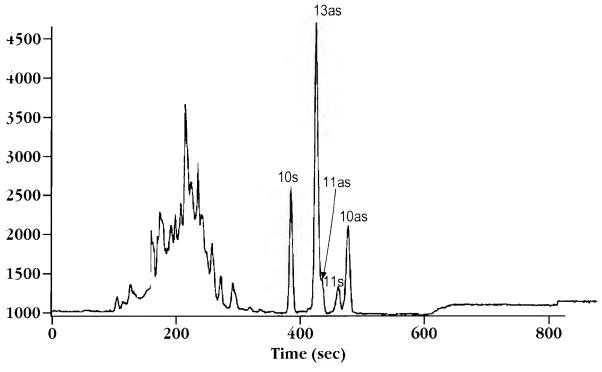


Fig. 23A

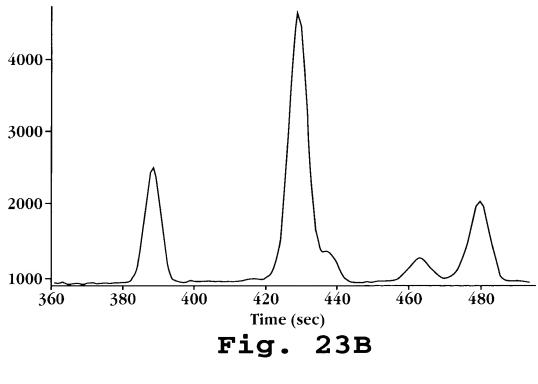


Fig.

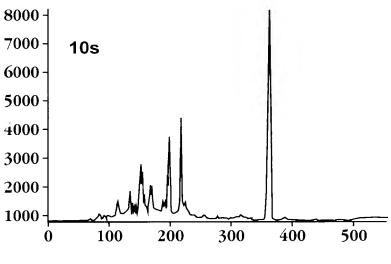


Fig. 23C

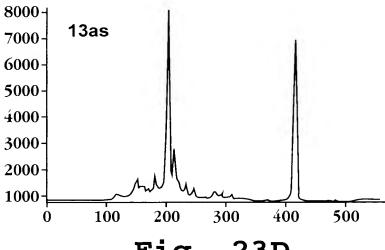


Fig. 23D

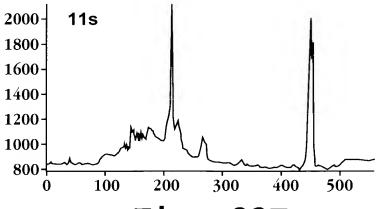


Fig. 23E



Fig. 23F

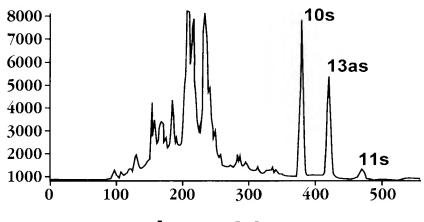


Fig. 23G

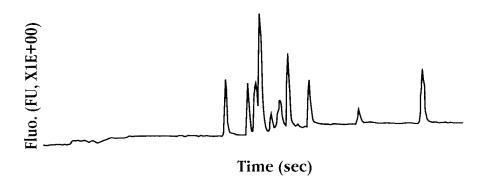
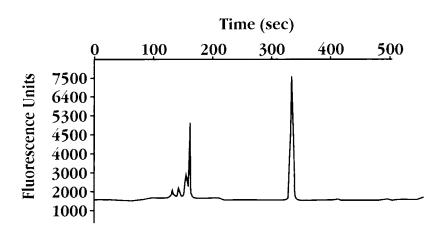


Fig. 24



14 55 14 14 15

Fig. 25A

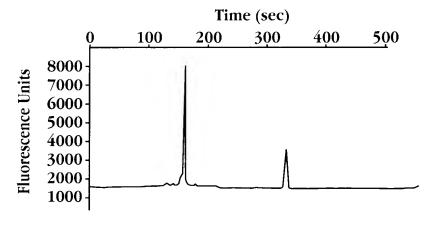
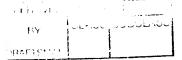


Fig. 25B



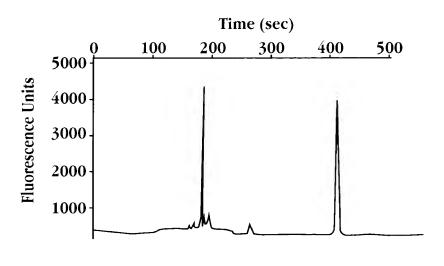


Fig. 25C

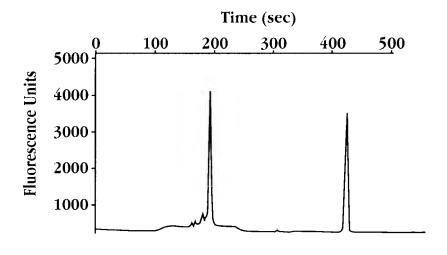


Fig. 25D

Alteria	1	
	1 12	ۇرىسىدىنىدىن ئارلارلارلارلارلارلارلارلارلارلارلارلارلا
FIY	Cal Condi	LUCULACO
	ĺ	
er graphical control	1	<u> </u>

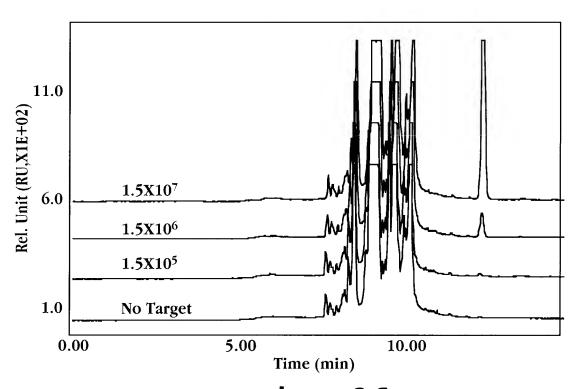


Fig. 26

Aithuil	
DUALISMA	70.000.00

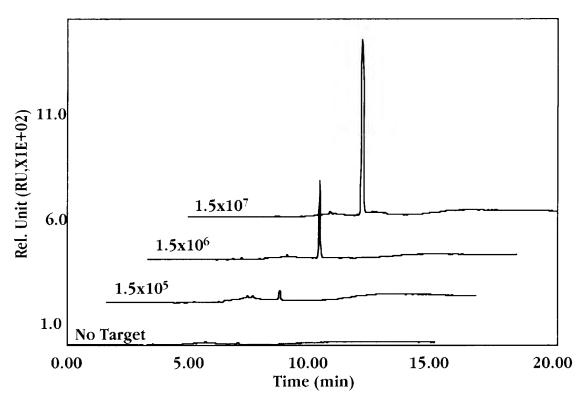


Fig. 27

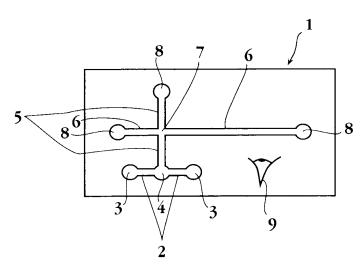


Fig. 28A

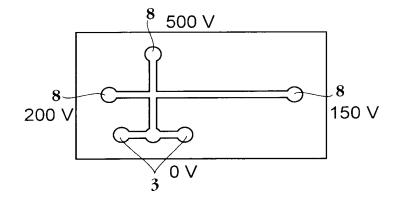


Fig. 28B

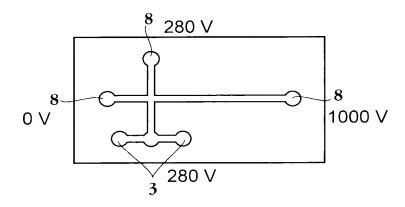


Fig. 28C

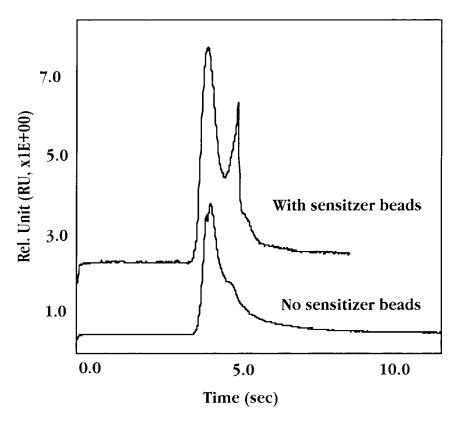


Fig. 29

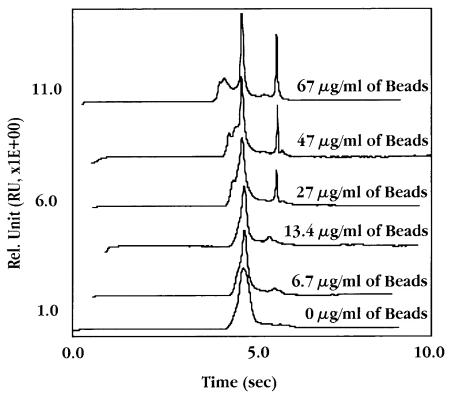


Fig. 30



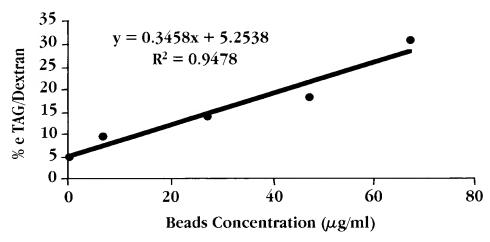


Fig. 31

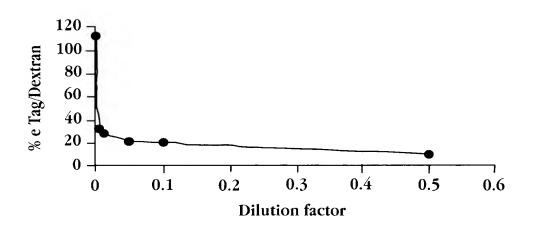


Fig. 32

Fig. 33

Fig. 34